

CLAIMS

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is as follows:

- 1 1. A computer system for ranking one or more objects having two or more attributes,
2 comprising:
3 a data aggregator that integrates data from two or more enterprise data sources
4 into an aggregated enterprise database;
5 a knowledge base generator that constructs a knowledge base by extracting at
6 least one of facts and rules from the aggregated enterprise database and stores the facts
7 and rules in a knowledge base database; and
8 a bid configurator that constructs one or more sell bid candidates for one or more
9 target RFQs by using at least one inference engine and the extracted facts and rules from
10 the knowledge base database.
- 1 2. The system of 1, wherein the enterprise data sources include one or more of (i)
2 inventory systems, (ii) fulfillment systems, (iii) customer service systems, (iv) database
3 systems that contain product information, (v) database systems that contain buyer
4 information, (vi) database systems that contain historical information about trading and
5 sales, (vii) database systems that contain market information and (viii) computer systems
6 of trading partners including distributors and logistics providers.
- 1 3. The system of 1, wherein the knowledge base database comprises facts and rules stored
2 in the form that is understood by the at least one inference engines.
- 1 4. The system of 1, wherein the facts are truthful data about one or more of objects
2 including products, services, buyers, sellers, stock markets, sell bids, RFQs, and

3 marketplaces.

1 5. The system of 1, wherein the rules comprise an “if” portion and a “then” portion, the
2 “if” portion of the rule is a series of patterns which specify the facts which cause the rule
3 to be applicable and the “then” portion of the rule is the set of actions to be executed
4 when the rule is applicable.

1 6. The system of 3, wherein the at least one inference engine matches the facts against
2 patterns and determines which rules are applicable.

1 7. The system of 1, wherein the one or more sell bid candidates comprise one or more
2 attribute name and value pairs, each of which belongs to one or more attribute categories.

1 8. The system of 1, wherein the RFQs comprise one or more attribute name and value-
2 range pairs, each of which belongs to one or more attribute categories.

1 9. The system of 7, wherein the attribute categories include product specification, service
2 specification and seller qualification.

1 10. The system of claim 1, wherein the knowledge base generator further constructs the
2 knowledge base database from other business rules including at least one of selling
3 policies and trading partner agreement of a seller's organization not found in the
4 aggregated enterprise database.

1 11. The system of claim 1, wherein the knowledge base generator includes a fact
2 collector and a rule generator,
3 the fact collector identifies and filters the data or facts that are useful for bid
4 configuration from the aggregated enterprise database and stores the facts in the

5 knowledge base database in the form that is understood by the at least one inference
6 engine used by the bid configurator, and
7 the rule generator searches for the aggregated enterprise database, creates useful
8 rules out of given data, and stores the useful rules in the knowledge base database in the
9 form that is understood by the at least one inference engine.

1 12. The system of claim 1, further comprising a bid revision module that allows one or
2 more sellers to review and revise content of the one or more sell bid candidates that are
3 constructed for one or more target RFQs from the bid configurator.

1 13. A method of configuring one or more sell bids, comprising the steps of:
2 aggregating data from one or more enterprise data sources;
3 storing the aggregated enterprise data in an integrated database system;
4 extracting one or more facts useful for bid configuration from the integrated
5 database system;
6 deriving one or more rules useful for bid configuration from the integrated
7 database system;
8 constructing one or more knowledge base systems by storing the facts and rules in
9 a form understood by one or more inference engines; and
10 constructing one or more sell bid candidates for one or more target RFQs by
11 running one or more facts and rules from the target RFQs and the knowledge base system
12 to the one or more inference engines.

1 14. The method of claim 13, further comprising the step of reviewing and revising
2 content of one or more of the sell bid candidates, if necessary.

1 15. The method of claim 13, wherein the one or more inference engines matches the facts
2 against patterns and determines which rules are applicable.

1 16. The method of claim 13, further comprising the steps of constructing the one or more
2 knowledge base systems from business rules including at least one of selling policies and
3 trading partner agreement of a seller's organization not found in the knowledge base
4 system.

1 17. The method of claim 13, further comprising the steps of:
2 identifying and filtering the data or facts that are useful for bid configuration from
3 the integrated database system;
4 storing the facts in the one or more knowledge base systems in the form that is
5 understood by the one or more inference engines;
6 creating useful rules out of the data; and
7 storing the useful rules in the one or more knowledge base systems in the form
8 that is understood by the one or more inference engines.

1 18. A machine readable medium containing code for configuring one or more sell bids,
2 the code implementing the steps of:
3 aggregating data from one or more enterprise data sources;
4 storing the aggregated enterprise data in an integrated database system;
5 extracting one or more facts useful for bid configuration from the integrated
6 database system;
7 deriving one or more rules useful for bid configuration from the integrated
8 database system;
9 constructing one or more knowledge base systems by storing the facts and rules in
10 a form understood by one or more inference engines; and
11 constructing one or more sell bid candidates for one or more target RFQs by
12 running one or more facts and rules from the target RFQs and the knowledge base to the